

## Practice Test - Finance

1. Calculate the missing information in the table. (p.460 #6)

Principal, P(\$)	Interest Rate, r (%)	Time, t	Simple Interest, I(\$)
735.00	5.5	27 days	
	8.25	240 days	138.25
182.65	6.75		23.28
260		2 months	16.50

2. Afzal can buy a \$2000 GIC from a bank that earns 6.5% compounded annually for 5 years. At another bank, he can buy a \$2000 GIC that earns 7% simple interest for 5 years. (p.461 #11)

- a) Which GIC earns more interest?
- b) How much more interest does it earn?

3. Complete the table. (p.468 #2)

Principal	Annual Interest Rate (%)	Time (years)	Compounding Frequency	i (%)	n	Amount (\$)	Interest Earned
400	5	15	Annually				
750	13	5	Semi-monthly				
350	2.45	8	Monthly				
150	7.6	3	Quarterly				
1000	4.75	4	Daily				

4. If \$350 grows to \$500 in 3 years, what is the annual interest rate assuming that interest is compounded annually? (p.469 #8)
5. Betty plans to send her parents on a \$15000 vacation for their 30<sup>th</sup> wedding anniversary 10 years from now. She would like to invest the money today in a GIC term deposit earning 6%/a compounded semi-annually and split the cost of its purchase with her sister and brother. How much will each person contribute towards the purchase of the GIC? (p.477 #11)

6. Jason borrowed money that he will pay back in 3 years' time. The interest rate was 5.25%/a compounded monthly. He will repay \$3350 after 3 years. How much money did Jason borrow? (p.477 #10)
7. Marshall wants to have \$5000 in 4 years. He has two options for investment" A saving account will pay 3.5%/a compounded monthly; a GIC will pay 3.4%/a compounded semi-annually. Which investment should Marshall pick and why? (p.478 #15)
8. How long does it take for an investment to triple in value at 10%/a interest compounded monthly? (p.487 #7)
9. What interest rate is needed for \$20 000 to double in 5 years if the interest is compounded quarterly? (p.486 #1c)
10. Yanmei has contributed \$250 to an RRSP at the end of each 3-month period for the past 35 years. During this time, the RRSP has earned an average of 11.5%/a compounded quarterly.
  - a. How much will the RRSP be worth at maturity?
  - b. How much of the investment will be interest earned over the 35 years? (p.499 #7)
11. Mario deposits \$25 at the end of each month for 4 years into an account that pays 9.6%/a compounded monthly. He then makes no further deposits and no withdrawals. Determine the balance 10 years after his last deposit. (p.500 #11)
12. Mary needs \$750 a years to buy textbooks. She will start university in 1 year. Her savings account pays 4%/a compounded annually. How much needs to be in her account now to pay for the books? (p.507 #5)
13. 'Shimon wants to buy a speedboat that sells for \$22 000, including all taxes. The dealer offers either a \$2000 discount, if Shimon pays the total amount in cash, or a finance rate of 2.4%/a compounded monthly, if Shimon makes equal monthly payments for 5 years. (p.507 #11)
  - a. Determine the monthly payment that Shimon must make if he chooses the second offer.
  - b. What is the total cost of the Dealer's finance plan for the speedboat?
  - c. Shimon can pay cash if he borrows the money from the bank at 6%/a, compounded monthly, over 5 years. Which offer should Shimon choose?

## TVM Solver - Graphing Calculator Questions

Fill in the tables and find the unknowns.

- a) When Ron was born, a \$5000 deposit was made into an account that pays interest compounded quarterly. The money was left until Ron's 21<sup>st</sup> birthday, when he was presented a cheque for \$12 148.79. What was the annual interest rate? (p.487 #8)

N	I%	PV	PMT	FV	P/Y	C/Y

- b) Shirley redeemed a \$2000 GIC and received \$2220. The GIC paid interest at 5.25%/a compounded quarterly. For how long was the money invested? (p.487 #9)

N	I%	PV	PMT	FV	P/Y	C/Y

- c) If \$1000 is deposited at the end of each year in an account that pays 13.5%/a compounded annually, about how many years will it take to accumulate to \$20 000? (p.519 #7)

N	I%	PV	PMT	FV	P/Y	C/Y

- d) An account pays 9.2%/a compounded annually. What deposit on January 1 of this year will allow you to make 10 annual withdrawals of \$5000, beginning January two years from now? (p.519 #9)

N	I%	PV	PMT	FV	P/Y	C/Y

- e) An \$18 000 car loan is charged 4%/a interest compounded quarterly. Determine the quarterly payments needed to pay the loan off in 5 years? (p.518 #2a)

N	I%	PV	PMT	FV	P/Y	C/Y